

MECHANICS OF PROJECT MANAGEMENT

FHWA PROCESS FOR PROJECT IMPLEMENTATION

STP PROJECTS

ENHANCEMENT PROGRAM

SAFETY PROJECTS

CMAQ PROJECTS

HBP PROJECTS

HIGH PRIORITY PROJECTS

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MECHANICS OF PROJECT MANAGEMENT

FHWA PROCESS FOR PROJECT IMPLEMENTATION

The Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) authorizes highway, highway safety, and transit and other surface transportation programs for five years extending through FFY 2009. It builds on the initiatives established in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century of 1997 (TEA-21)

Federal-aid programs available to local agencies, as a result of SAFETEA-LU, include:

- the Surface Transportation Program
 - ⇒ Urban STP
 - ⇒ Rural STP
 - ⇒ Enhancement Program
 - ⇒ Safety Program;
- the Congestion Mitigation and Air Quality Program;
- the Highway Bridge Program
- Demonstration Projects.

The **Surface Transportation Program** (STP) funds may be used to improve any road that is not functionally classified as local or rural minor collector. STP urban funds can also be used for transit capital projects and bridge projects on any road. STP funds for improvements on the local urban highway and street system are distributed to the City of Chicago and to eleven regional councils that represent the suburban metropolitan area in northeastern Illinois.

The **Illinois Transportation Enhancement Program** is a federally funded program for projects that serve to enhance the transportation system by either serving a transportation need or providing a transportation use or benefit. The categories of projects eligible for enhancement funding include pedestrian and bicycle facilities; scenic or historic highway programs; landscaping and scenic beautification; historic preservation; rehabilitation of historic transportation buildings, structures, or facilities; safety and educational activities for pedestrians and bicyclists; acquisition of scenic easements and scenic or historic sites; preservation of abandoned railway corridors for the conversion and use for pedestrian and bicycle trails; control and removal of outdoor advertising; and the establishment of transportation museums. Ten percent of the state's STP allocation must be used for Enhancement projects. Since the source of these funds is the Surface Transportation Program, the process for managing enhancement projects is the same as that of other local agency improvement projects funded with STP funds.

The Local Roads **Hazard Elimination Safety Program** funds projects that reduce the number and severity of accidents at spots and short sections identified as high accident rate locations. Ten percent of the state's STP allocation must be used for Safety projects. Since the source of these funds is the Surface Transportation Program, the process for managing safety projects is the same as that of other local agency improvement projects funded with STP funds.

The **Congestion Mitigation and Air Quality (CMAQ) Improvement Program** directs federal funds toward transportation projects in Clean Air Act non-attainment areas for ozone and carbon monoxide. The funds are to be used for projects that contribute to attainment of air quality standards through congestion relief. The types of projects that are eligible for CMAQ funding include transit improvements; bus and bus engine replacements; commuter parking lots, traffic flow improvements; bike and pedestrian facility projects; and bike parking and bike encouragement projects. These projects also have to be managed the same as other federally funded projects.

The **Highway Bridge Program (HBP)** provides federal dollars for local agencies to address their bridge needs. These funds are eligible for bridge improvements on any public road. These projects also have to be managed the same as other federally funded projects.

SAFETEA-LU authorized funding for numerous specific projects in Illinois in a program referred to as the **High Priority Program**. The federal funds for each of the High Priority Program demonstration projects are being allocated to the states over the 5-year period of the authorization act.

ALL FEDERALLY FUNDED PROJECTS HAVE TO FOLLOW FEDERAL GUIDELINES.

In the past, the process of implementing a federally funded project from funding determination until it is ready for a letting includes the following items which are all discussed in the Federal-Aid Procedures for Local Highway Improvements. As of January 2006 the guidelines and criteria are set forth in the Bureau of Local Roads and Streets (BLRS) Manual. The BLRS Manual is comprised of 42 chapters divided into four parts as follows:

- Part I - General (Chapters 1 through 8)
- Part II – Policies and Procedures for Motor Fuel Tax and State-Funded Projects (Chapters 9 through 16)
- Part III – Policies and Procedures for Federal-Aid Projects (Chapters 17 through 26)
- Part IV – Project Design (Chapters 27 through 42)

All parts would apply to Federally funded projects with the exception of Part II.

Planning and Programming

- Estimates of federal funds are made available for the programming of local agency projects.
- All federally funded projects have to be included in the annual element of the transportation improvement program (TIP) before any federal dollars can be authorized.
- The CATS Council of Mayors and the counties develop projects for the locally programmed STP and submit the list to CATS for inclusion in the TIP. IDOT, Local Roads and Streets, develops projects for the local portion of the bridge program and submits the list, along with the High Priority projects, to CATS for inclusion in the TIP.
- NIPC/State clearinghouse reviews need to be initiated prior to any authorization of federal funds.

Local Agency Resolutions

- Local agencies proposing projects for federal funding are responsible for the local match. STP funds, including the Enhancement Program, CMAQ funds, HBP funds, and High Priority Projects all require a 20% local match. A commitment providing for these matching funds is required from the local agency. This is accomplished by resolutions/ordinances for counties and municipalities or a road improvement statement for road districts.
- It is also necessary that the local agency concur in the Department's action with respect to the low bid received at a letting.

Engineering Agreement

- Local agencies may secure federal participation in the costs of preliminary engineering and construction engineering for federally funded improvements provided that prior IDOT approval is secured and the procurement procedures within the BLRS Manual are observed. State statutes require qualification-based procedures. Competitive bidding process is prohibited by law.
- IT IS RECOMMENDED THAT CONSULTANTS BE PRE-QUALIFIED WITH THE STATE OR BE ABLE TO BECOME QUALIFIED.
- Standard agreement forms BLR 0560 10 (Preliminary Engineering) and BLR 056 11 (Construction Engineering) are included in the BLRS Manual and are available on-line.
- IDOT District Local Roads will process agreements for approval.

Joint Agreement (Local - State)

- The commitment for the local agency's matching funds is part of a joint agreement executed between the local agency and the State. IDOT will prepare the joint agreement after the local agency sends IDOT the engineering agreement for processing.
- A local-state agreement is required when local funds are involved in projects financed in part with State and/or Federal funds. This is applicable to the engineering, land acquisition and construction phases of a project, if federal or state funds are used in any of those phases.
- Included in the agreement is specific information regarding financial responsibility and method of payment of funds by all parties.
- Local contracts (i.e., typical engineering agreements). Local agency needs to appropriate total cost of contract and make payment as costs are incurred. The State will reimburse the local agency for that portion of the cost payable from Federal funds and the State's share based on the agreed upon division of cost.
- State contracts (i.e., State let contracts). State awards the contract, makes payment for costs incurred, and seeks reimbursement from the local agency for that portion of the cost designated as local agency share on the agreed upon division of cost.
- Methods of Payment
 - ⇒ Lump Sum Payment
 - ⇒ Monthly Payments
 - ⇒ Progress Payments
- Form BLR 053 10 should be used when a single local agency and the State are the only parties to the agreement. This form can be accessed in the internet by typing www.dot.il.gov.
- Provisions listed in the agreement specifically require the local agency to maintain the completed improvement in a manner satisfactory to the State and FHWA.
- No reimbursement of federal dollars will be allowed for expenditures made prior to the date of federal authorization.

Phase I Engineering

- Application approval **IS NOT** design approval. Recommended projects are chosen based on proposed scope - not details of design.
- Metric
 - ⇒ All new project starts should be in the English system. Projects which have been started in the metric system may be completed in the metric system.
- Data Collection
 - ⇒ Verify Functional Classification and FAU status of project roadway and termini (Coordinate through Planning Liaison or BLRS)
 - ⇒ Coordinate traffic counts and projections with CATS (design for construction + 20 years)
 - ⇒ Review existing right of way vs. proposed right of way
 - ⇒ Known wetlands?
 - ⇒ Floodway/Floodplain Maps
 - ⇒ Obtain copy of Bridge Structure Master Report
 - ⇒ Accident Data (obtain from IDOT, Division of Traffic Safety, 217/782-2575)
 - ⇒ Improvements on adjacent roadways
- Define Scope of Improvements
 - ⇒ What is the purpose of and need for the project?
 - ⇒ What is necessary to address the need for the improvement?
 - ⇒ What are the constraints?
 - ⇒ What is project cost?
 - * Project sponsors need to justify cost increases.
 - * TIP and IDOT program have to be adjusted.
- Determine Environmental Impacts
 - ⇒ Review project area for
 - * Cultural Properties
 - * Archaeological Resources
 - * Threatened & Endangered Species
 - * Wetlands
 - * Floodways
 - * Hazardous/Special Waste Sites

Phase I Engineering

(continued)

- ⇒ Submit Environmental Survey Request (ESR) if
 - * Right-of-way is required.
 - * There is instream work. Or
 - * Project is located in a historic district.
- Environmental Factors
 - ⇒ Social Impact
 - ⇒ Economic Impact
 - ⇒ Noise
 - ⇒ Air Quality
 - ⇒ Aesthetic Impact
 - ⇒ Construction Impact
 - ⇒ Compatibility w/Land Use & Transportation Plans
- Special Reports
 - ⇒ Section 4(f) - Parkland
 - ⇒ Section 106 - Historical Properties
 - ⇒ Section 6(f) - LAWCON Properties
 - ⇒ Wetland Delineations and Wetland Impact Evaluation
 - ⇒ Bridge Condition Report (BCR)
 - ⇒ Preliminary Bridge Design/Hydraulic Report (PBDHR)
 - ⇒ Floodplain/Floodday Permit
 - ⇒ 404 Permit
- Early coordination should be initiated with agencies which are likely to exercise some jurisdiction that may affect the improvement.
 - ⇒ Jurisdictional Agency
 - ⇒ USEPA & IEPA
 - ⇒ Corps of Engineers
 - ⇒ DNR & IHPA
 - ⇒ FAA & Division of Aeronautics

Phase I Engineering

(continued)

- Coordinate Scope/Impacts with Public
 - ⇒ The involvement of the public in the decision making process is required by state and federal regulations.
 - ⇒ News releases, Informational Meetings, Public Hearings are options depending upon the scope of work, impacts of proposed improvement, and controversy anticipated.
 - ⇒ If a project does not have the potential for extraordinary circumstances, then formal public involvement documentation is not required, unless there is the potential for controversy.
- Process Engineering/Environmental Report
 - ⇒ Determination and concurrence on the level of environmental processing at FHWA/IDOT/Local Agency Coordination Meeting.
 - ⇒ Categorical Exclusions
 - ⇒ CE Type I - no report required
 - ⇒ CE Type II - use BLR Form 221 10 as report format (This form can be accessed on the internet by typing www.dot.il.gov)
 - * Central Office approved projects (9-18 months) depending on the extent of environmental impacts.
 - * District approved projects (6-15 months)
 - ⇒ Environmental Assessments, Environmental Impact Statements (Min. 18 months)
 - ⇒ Projects which have the potential to be processed as CEs, but which generally have been processed with EAs in the past (i.e., add lanes projects) are eligible for the Environmental Class of Action Determination (ECAD) procedures. The implementation of the ECAD procedures does not change any of the procedures or requirements for EISs, EAs, or CEs; it leads to the decision on whether an eligible project should be processed as a CE or with an EA or EIS and provides a structure for evaluating and documenting the basis for that decision. (CE II projects with ECAD usually take 12-18 months to complete.)
 - ⇒ Section 4(f) documentation has to be provided if the use of public recreational land is impacted or altered. For pedestrian/bike/horse trails, if the maintaining agency of the 4(f) property provides written concurrence on the scope of the project or co-sponsors the project, there is no need for the preparation of a Section 4(f) document.

Land Acquisition

- In some cases, federal funds may be used for land acquisition, depending on the federal funding program being utilized for the project and subject to the particular Council of Mayors programming and funding rules.
- If federal or state funds are utilized in any phase (phase 1 or 2 engineering, land acquisition or construction), the IDOT Division of Highways Land Acquisition Policies and Procedures Manual must be followed to ensure full compliance with Title II and Title III of the “Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970”.
- Projects must be constructed on land that is in public ownership. A permanent easement is the minimum interest for real property to be considered in public ownership (except for bike path projects).
- State legislation makes an exception for bike path projects, which can be constructed on private land by agreement with the owner for a minimum duration of 20 years. Lease agreements must not contain any provisions which would restrict access or use during the 20 year useful life of a bikeway.
- Land acquisition includes any and all temporary and permanent easements and fee takes required to construct a proposed improvement.
- Donations of property can be accepted only after the property owner signs a Donation Letter which clearly advises of the owner’s right to an appraisal and just compensation. Although an appraisal is not required for a donated parcel, all other conveyance and compliance documents and negotiation activities are required.
- All land acquisition projects must be *certified* six weeks prior to the letting date.

Acquisition Schedule

- Plats of Highway, legal descriptions & title reports 3 Months
Should be done during Phase I Engineering
- Appraisal and Appraisal Review 3 Months
May be done during Phase I Engineering if no federal funds being used for acquisition
- Negotiations 3 Months
Can not begin prior to Design Approval date
- Condemnation 9 to 18 Months
Varies by county. L.P.A.’s do not have quick take authority

Phase II Engineering

- No Phase II Engineering without Design Approval and Phase II Authorization when local agency is using federal funds for Phase II Engineering.
- General Phase II Timeframes (from Preliminary Meeting to Final Plan Submittal)
 - ⇒ Reconstruction, 4-6 months
 - ⇒ Widening and Resurfacing, 4-6 months
 - ⇒ Simple Span Structure, 1-4 months
 - ⇒ Multi-Span Structure, 4-6 months
 - ⇒ Intersection with signals, 6 months
 - ⇒ Landscaping, 1-3 months
 - ⇒ Bike Paths, 1-3 months
- Project Report Must Be Followed
- The Necessary Railroad and Utility Agreements Must be Prepared and Executed

Plans, Specifications, and Estimates Refer to BLRS Manual and Coordinating BLRS Engineer

Plans

- Title Sheet
- Typical Sections
- Summary of Quantities
- Plan/Profile
- Drainage/Utility
- Details
- Traffic Control Plan Cross-Section
- Highway Standard (inserted by central Office)

Specifications

- Check Sheet from Supplemental Specifications and Recurring Special Provisions
- Special Provisions
 - Pay items not covered in standard specifications
 - Special directions to Contractor
- Interim Special Provisions (Obtain from BLR)

Estimates

- Cost (BLR 115 10)
- Estimate of Time

Preliminary Contract Plan Review Submittal of 75% Complete PS&E

Every Project (4 Weeks)

Submittal Items

- Plans
- Specifications
- Estimates (Cost and Time)

Review By:

- Bureau of Local Roads
- Bureau of Construction

If Scope Involves Impact to State Route (4-12 Weeks)

Review By:

- Bureau of Design
- Bureau of Maintenance
- Bureau of Traffic
Traffic Control/Striping
Signal Modifications (3-8 months)

Lighting (4-8 Weeks)

Review by:

- Bureau of Electrical Operations

Structure Plans (1-6 Months)

- 1 span bridge - District Review
- >1 span - Bridge Office Review

Soils Report? (4-8 Weeks)

Bureau of Materials Review (if not already done in Phase I)

Note:

Reviews are done concurrently

Pre-Final Plan Review Submittal of 85% Complete PS&E

Review By:

- Bureau of Local Roads (2-4 Weeks)
- Bureau of Traffic (8-12 Weeks)
 - If signal on State Route
 - Addressing Preliminary Review Comments
- Bureau of Electrical Operations (4-12 Weeks)
 - If Lighting is proposed
 - Addressing Preliminary Review Comments

Note:

- Assumes Preliminary Plan Review has already occurred.
- Includes Preparation of Joint Agreement

Final Plan Review Submittal of 100% Complete PS&E

Minimum of 1-2 weeks prior to Final PS&E due date

Includes:

- Final Resolution of any outstanding comments
- Final Cost Estimate

Submittal of Final PS&E 100% Complete

- Submit to District minimum of 1 week prior to BLR Due Date shown on letting schedule.
- Includes final plans (mylars), specifications, cost and time estimates.
- Landscaping and bike path plans may only require 8 1/2 X 11 plan sheets together with the other documents

Construction

Letting:

- The official public opening and reading of submitted bids by the awarding authority for the purpose of determining the lowest responsible and qualified bidder.

Service Bulletin:

- A summary of proposed construction contracts for a particular letting. Service Bulletins published approximately four weeks prior to a letting.

Award of Contract:

- An award is the decision of the Department to accept the proposal of the lowest responsible and qualified bidder for proposed work. This acceptance is subject to the execution and approval of the contract, and the receipt of a contract bond. The award of a contract will be made within 45 days after the letting.

Pre-Construction Conference:

- Meeting with IDOT, contractor, and local agency to discuss the plans and specifications of the project, unusual conditions, methods and schedule of operation, potential utility conflicts, mobilization of equipment, labor requirements, traffic control, and federal requirements. The Pre-Con is held before any work on the project has started.

Municipal Resident Engineer (R.E.):

- The County Engineer, Municipal Engineer, or a full-time publicly-employed registered professional engineer. The R.E. is responsible for all construction details on a project.

Construction Inspection:

- Qualified Staff:
 - Project inspectors perform the day-to-day duties of layout, inspection, quantity measurements, and documentation. They can be either public employees or consultant employees.
 - The field inspection resident engineer is responsible for adequately instructing project inspectors concerning the requirements of the contract documents and the procedures contained in the Departments' Construction Manual. The field inspection resident engineer can be either a public employee or a consultant employee.

- Good Documentation:
 - The field inspection resident engineer is responsible for the accuracy of all field records, inspection reports, change orders, and pay estimates.
- Material Inspection:
 - The local agency must furnish the necessary inspection to insure that all material used in the project meets all contract specifications.

References

Bureau of Local Roads and Streets Manual, Illinois Department of Transportation Bureau of Local Roads and Streets, January 2006

Federal-Aid Procedures for Local Highway Improvements. Illinois Department of Transportation Bureau of Local Roads and Streets, Rev. 5-90.

Bureau of Design and Environment Manual. Illinois Department of Transportation, November 1999.

A Policy on Geometric Design of Highways and Streets 1994. American Association of State Highway and Transportation Officials.

Highway Standards, IDOT, Rev. 2001

Manual on Uniform Traffic Control Devices

Construction Manual. Illinois Department of Transportation Division of Highways, Rev. 4-2000

Standard Specifications for Road and Bridge Construction (including Supplemental Specifications). January 1, 2002.

AASHTO Guide for the Development of Bicycle Facilities, 1999.

Secretary of the Interior's Standards for Historic Preservation Projects, 1992.

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BUREAU OF LAND ACQUISITION

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Attachments

- Federal Aid Project Initiation to Completion Diagram
- STP Project Milestone Schedule (blank form)
- STP Project Scoping/Field Review Report (blank form)
- Letting Schedule
- Council of Mayors' Funding Parameters for STP Projects.
- Subregional Planning Staff
- Bureau of Local Roads and Streets Form Cross Reference Sheet(s)
- Local Agency Agreement for Federal Participation (BLR 053 10) (This form can be accessed on the internet by typing www.dot.il.gov)
- Preliminary Engineering Services Agreement for Federal Participation (BLR 056 10)
- Construction Engineering Services Agreement for Federal Participation (BLR 056 11)
- Consultant Procurement Procedures
- Invoices Form BD 056 20
- Listings for Categorical Exclusion Type Projects
- Integrated Environmental Survey Process (This form can be accessed on the internet by typing www.dot.il.gov)
- Wetland Procedures for Local Agencies (This form can be accessed on the internet by typing www.dot.il.gov)
- Illinois COSIM Input Worksheet
- Local Project Development Report for Group II Categorical Exclusions and Design Approval (BLR 221 10) (This form can be accessed on the internet by typing www.dot.il.gov)
- Local Agency Pavement Preservation Policy (LAPP)
- Land Acquisition by Local Public Agencies
- How to Order IDOT Manuals (This form can be accessed on the internet by typing www.dot.il.gov)

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